BEHAVIOR SERIES

Your Pregnancy and Your Cat

DON'T FALL PREY TO MYTH AND MISINFORMATION!
Being pregnant doesn't mean you have to give up caring for your cat. Learn the real scoop on pregnancy, cat litter boxes, and toxoplasmosis—and the simple steps you can take to reduce the risk.

And Baby Makes Three

Congratulations, you're expecting a baby! You've probably heard of toxoplasmosis because it can cause serious birth defects. A woman who acquires toxoplasmosis during pregnancy can transmit the infection to her unborn child. It is this infection in utero which causes fear among cat owners as congenital toxoplasmosis infection can lead to miscarriage or an array of malformations at birth. Many pregnant women will try to lower their risk of acquiring toxoplasmosis by abandoning their cats.

However, toxoplasmosis is a rare disease in countries like ours and is one that can easily be avoided. Cats acquire toxoplasmosis from eating contaminated raw meat, birds, mice, or soil. While cats are the only species of animal to shed the infectious stage in their feces, other animals can disseminate toxoplasmosis if their infected meat is eaten without proper cooking.

Fortunately, cat ownership does not necessarily increase the risk of acquiring toxoplasmosis. An understanding of the life cycle of *Toxoplasma gondii* (*T. gondii*) and the role that cats play in disease transmission can allay fears of transmitting congenital toxoplasmosis. Cats should continue to be sources of joy and companionship to their owners during pregnancy and following the birth of a child.

Life Cycle

T. gondii is a protozoan organism that can infect all mammals, who serve as an intermediate host. The cat is the only animal who can support both sexual and asexual reproduction of *T. gondii*, and thus plays a crucial role in the organism's life cycle.

T. gondii exists primarily in three forms. Oocysts develop as a result of sexual reproduction, which occurs in the small intestine of a cat who has consumed tissue cysts containing *T. gondii*. These infectious oocysts are produced for approximately two weeks after a cat first acquires the infection, which usually occurs in a kitten who hunts outdoors. Once a cat has been infected with toxoplasmosis, she acquires immunity and only rarely can be reinfected. Therefore, only during her first exposure to *T. gondii* does a cat excrete potentially infectious oocysts. In addition, oocysts are not immediately infective and require an incubation period of one to five days to become infective.

Humans acquire toxoplasmosis by one of three mechanisms. Most commonly, undercooked meat which contains *T. gondii* within tissue cysts is consumed. Direct ingestion of infective oocysts is a less common method of acquisition and is unlikely to occur from

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direct cat contact. Transplacental transmission may occur when a mother acquires a primary infection while pregnant.

Why Are Cats Unlikely to Directly Transmit Toxoplasmosis?

Cats are unlikely to directly transmit toxoplasmosis to their owners for a number of reasons. First of all, only cats who ingest tissue cysts acquire infection. To the feline population, this includes outdoor cats who hunt and eat uncooked mice and other rodents, as well as cats who are fed raw meat by their owners as a treat. In addition, only after a cat is first exposed to *T. gondii* does she excrete oocysts, and she does so for only two weeks. An outdoor hunting cat is often exposed as a kitten and is less likely to transmit infection as he ages. Therefore, based on odds alone, the risk of direct contact with a cat who is excreting oocysts is rare.

Secondly, oocysts are not immediately infectious and require one to five days to become infective. Therefore, if the litter is changed daily, exposure to infective oocysts is unlikely to occur.

Finally, since oocysts are transmitted by ingestion, an owner must make contact with contaminated feces in the litter box and then, without adequately washing her hands, touch her mouth.

How Should a Cat Owner Lower the Risk of Toxoplasmosis?

Based on an understanding of the life cycle of *T. gondii* and the role cats play in disease transmission, the following are general recommendations that cat owners expecting a child can follow:

- Wear gloves when working in soil. If gloves are not worn, hands need to be washed thoroughly following soil contact.
- Wash all uncooked vegetables thoroughly.
- Indoor cats eating only prepackaged food do not acquire toxoplasmosis, and the litter box, therefore, is not a source of infection.
- Outdoor cats or indoor cats eating uncooked meat can acquire toxoplasmosis. In this situation, pregnant women should avoid changing the litter or do so only with rubber gloves.
- Change the litter on a daily basis.
- Do NOT get rid of your cat.

How Is Congenital Toxoplasmosis Diagnosed?

Congenital toxoplasmosis is rare, occurring in approximately 3,000 newborns per year in the United States. Even with primary infection, not all mothers will transmit the infection in utero. Infectivity increases over the course of pregnancy, with transmission rates of 15 percent, 30 percent, and 60 percent in the first, second, and third trimesters, respectively. However, the risk of severe congenital malformations is higher earlier in pregnancy.

Toxoplasmosis in the mother can be treated effectively with antibiotics, and additional antibiotics can be given to treat the fetus if congenital infection is documented.

Conclusion

Cat ownership has many benefits that are immeasurable in terms of companionship and love. While cats play an integral role in the life cycle of *T. gondii*, they are unlikely to directly transmit infection to their owners and can safely remain as a loved member of the family when you're expecting a new child.

Adapted from material originally developed by applied animal behaviorists at the Dumb Friends League, Denver, Colorado.

Related topics at *www.petsforlife.org*

- Preparing Pets for a New Baby

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